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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/036,402	01/07/2002	Takeshi Anzai	8004-1001	3621
466	7590	01/10/2006		
YOUNG & THOMPSON 745 SOUTH 23RD STREET 2ND FLOOR ARLINGTON, VA 22202			EXAMINER KAROVALIA, SAMIR	
			ART UNIT	PAPER NUMBER
			2645	

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/036,402

Applicant(s)

ANZAI, TAKESHI

Examiner

Samir S. Karovalia

Art Unit

2645

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 October 2005.  
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3, 9-13 and 15 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-3, 9-13 and 15 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All b) ☐ Some \* c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

### DETAILED ACTION

1. This action is in response to applicant's amendments filed 10/05/2005. Claims 1-3, 9-13, and 15 are currently pending in the application.

### ***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 9-13, and 15 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Hoory et al. (hereinafter "Hoory", US Patent No. 6,785,649).

Hoory clearly reads on the limitations 1-3, 9-13, and 15 (see the Summary of the Invention on cols. 1-4 and figures 2 and 3). Hoory discloses an invention in which speech is converted to text (character data) and additional characteristics (expression data) such as rate, volume, and pitch of the speech is associated with the text and transferred as expressive text. The expressive text is then used in an electronic mail transmission for display and/or to synthesize speech. Furthermore, it is inherent that in order for Hoory system to carryout speech-to-text conversion with associated expressive data, the system must comprise the necessary hardware (i.e., speech input device, A/D, speech recognizer, voice analyzer, and transmission data generator) to

Art Unit: 2645

analyze speech and convert it into digital format and must also comprise an added mechanism to associate expressive data of the speech with the text for transmission. Similarly, at the receiving end a system (i.e., character-voice converter and a voice generator) must be in place to convert the text with the associated expressive data back into speech or for displaying.

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedinger (US Patent No. 6,813,601) in view of Ichikawa et al. (hereinafter "Ichikawa", US Patent No. 4,975,957).

Hedinger in view of Ichikawa read on the claims as follows:

With respect to claim 1, Hedinger discloses a data input device (i.e., microphone 11 on figure 1) for receiving spoken words, an analog-to-digital converter (i.e., voice recognition system 12, which converts spoken words (analog) into a sequence of letters and gaps (digital)), and a speech recognition circuit (i.e., encoder 13, which codes the sequence of letters into a digital message).

Hedinger additionally teaches transmission of textual data or digital file (e-mail) over a mobile communication link (col. 3, line 47 – col. 4, line 6) but fails to disclose a voice analyzer which converts the digital signal to additional expression data and a transmission data generator which links character data with additional expression data to the transmission data.

However, Ichikawa in the same field of endeavor discloses a high efficiency speech coding transmission system in which speech information (spoken words) is separated into linguistic information (for conversion to character information) and personal information (e.g., accent and intonation of the person) by a speech analyzer (figure 2, unit 102). The separated information (character and intonation) is then encoded into a speech signal for transmission by the code editor/transmitter (figure 8, unit 813, i.e., transmission data generator). See Summary of Invention on cols. 1-2 and col. 12, lines 37-43. Ichikawa also teaches that in order for a character string to be converted to a voice with high quality it is necessary to synthesize accent and intonation as well as phoneme information of a speaker (col. 1, lines 55-58).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Hedinger and Ichikawa to convert

Art Unit: 2645

spoken words (analog) into sequence of letters (i.e., characters) and gaps (digital) for transmission as textual data or digital file as e-mail as taught by Hedinger and additionally provide a voice analyzing and transmission means which separates linguistic information and personal information of the speaker and combines the respective information for transmission resulting in a higher voice quality as disclosed by Ichikawa.

With respect to claims 2 and 3, it is inherent that a voice analyzer analyzes input levels (i.e., pitch extraction, see Ichikawa figure 2, unit 204-3) and frequencies (i.e., spectral analysis, see Ichikawa figure 2, unit 204-1) of the voice input.

7. Claims 9-13 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hedinger (US Patent No. 6,813,601) in view of Ichikawa et al. (hereinafter "Ichikawa", US Patent No. 4,975,957) and further in view of Hoory et al (hereinafter "Hoory", US Patent No. 6,785,649).

Hedinger in view of Ichikawa further in view of Hoory read on the claims as follows:

With respect to claim 9, Hedinger discloses a data input device (i.e., microphone 11 on figure 1) for receiving spoken words, an analog-to-digital converter (i.e., voice recognition system 12, which converts spoken words (analog) into a sequence of letters

and gaps (digital)), and a speech recognition circuit (i.e., encoder 13, which codes the sequence of letters into a digital message).

Hedinger additionally teaches transmission of textual data or digital file (e-mail) over a mobile communication link (col. 3, line 47 – col. 4, line 6) and a receiving portable communication terminal (figure 1, unit 20) which converts the digital message into spoken words using a speech synthesizer and announcing the converted spoken words using a speaker or which converts the digital message into spoken words and further converting the spoken words into text and displaying the textual message on a visual display (figure 2, steps 45-55).

Hedinger fails to expressly disclose a voice analyzer, which converts the digital signal to additional expression data and a transmission data generator which links character data with additional expression data to the transmission data in a transmitting portable communication terminal. Hedinger also fails to disclose displaying characters of the regenerated character data according to the regenerated additional expression data in a receiving portable communication terminal.

However, Ichikawa in the same field of endeavor discloses a high efficiency speech coding transmission system in which speech information (spoken words) is separated into linguistic information (for conversion to character information) and personal information (e.g., accent and intonation of a speaker) by a speech analyzer (figure 2, unit 102). The separated information (character and intonation) is then encoded into a speech signal for transmission by the code editor/transmitter (figure 8, unit 813, i.e., transmission data generator). See Summary of Invention on cols. 1-2 and

col. 12, lines 37-43. Ichikawa also teaches that in order for a character string to be converted to a voice with high quality it is necessary to synthesize accent and intonation as well as phoneme information of a speaker (col. 1, lines 55-58). Furthermore, Hoory discloses receiving text with at least one of the attributes of the text (i.e., see col. 3, lines 35-45, figures 2 and 3, font face, font style, character height, character width, character weight,...,color) associated with the text to express the non-verbal characteristics (e.g., accent and intonation of the speaker).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teachings of Hedinger in view of Ichikawa and further in view of Hoory to convert spoken words (analog) into sequence of letters (i.e., characters) and gaps (digital) for transmission as textual data or digital file as e-mail as taught by Hedinger and additionally provide a voice analyzing and transmission means which separates linguistic information and personal information of the speaker and combines the respective information for transmission resulting in a higher voice quality annunciation at the resulting end as disclosed by Ichikawa and in the case when the received text is displayed rather than annunciated, a recipient would be able to comprehend the expression of the speaker with attributes such as font, size, and color of the displayed text which would express the non-verbal characteristics (expression data) of the speaker as taught by Hoory.



Art Unit: 2645

With respect to claims 10 and 11, it is inherent that a voice analyzer analyzes input levels (i.e., pitch extraction, see Ichikawa figure 2, unit 204-3) and frequencies (i.e., spectral analysis, see Ichikawa figure 2, unit 204-1) of the voice input.

With respect to claims 12, 13, and 15, see claim 9 rejection for details. Specifically, modified invention of Hedinger in view prior art of record Hoory (see col. 3, lines 35-45, figures 2 and 3).

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir S. Karovalia whose telephone number is 571-272-8133. The examiner can normally be reached on Monday-Friday, 8:30am - 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Fan Tsang can be reached on 571-272-7547. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

Art Unit: 2645

published applications may be obtained from either Private PAIR or Public PAIR.

Status information for unpublished applications is available through Private PAIR only.


For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

S.S.K.

Art Unit: 2645



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